

## UltraWAVE R4S

Scalable MSC with Integrated Value Added Services



SPEC SHEET

The UltraWAVE R4S provides a cost-effective, plug-and-play GSM softswitch that adheres to 3GPP release 4 recommendations. Operators migrating to an all-IP core network now have a softswitch that enables an easy transition to packet switching while allowing connection to any legacy circuit-switched network, integrating landline and mobile users. The UltraWAVE R4S also offers local switching and distributed architecture that are essential for applications like island networks, cruise ships, emergency networks and military applications.

The UltraWAVE R4S offers a compact, scalable alternative to larger softswitches, delivering all the benefits and services IP technology offers—at an affordable price. ADC has integrated the most desired and revenue-generating features, such as Prepaid, Messaging and Voice Mail service.



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### Features

The UltraWAVE R4S benefits are made possible through a number of highly sought-after features that include:

- Ability to integrate the mobile switching center (MSC), visitor location registry (VLR), home location registry (HLR), and value-added services (VAS) on a single server, or run HLR and VAS on a standalone server
- MSC, VLR, HLR, AUC, Prepaid, SMSC and VMS
- MAP (v 1, 2 and 3) A, B, C, D, F and SMSC
- CAP (phase I, II and III)
- MGCP, Sigtran, SIP, and BICC
- Connectivity to legacy circuit-switched networks via Media Gateway (MGW) using ISUP and ISDN PRI
- Prepared for future introduction of SIP connectivity
- Future availability on a laptop platform for laboratories or other small-scale deployments
- Supports regulatory requirements such as Mobile Number Portability, NRTRDE and Lawful Intercept
- Interoperates simultaneously with IP and Circuit-switched RAN

### Benefits

- Enables increased coverage and capacity at an affordable cost
- Meets the desire to evolve from circuit switching to packet switching at a lower cost than commonly available solutions
- Streamlines migration to IP technology by providing easy integration with all-IP multimedia subsystems (IMS), while also allowing connection to legacy circuit-switched systems
- Simplifies system management and billing and allows value added services by providing a common IP backbone for all communication services
- Scales economically from 1,000 to 100,000 subscribers
- Increases operator revenue through local switching and distributed architecture, eliminating the need to carry voice payload over satellite backhaul
- Reduces operating costs by separating decisions regarding location and capacity of application, control and connectivity functions
- Enables smaller operators to stay abreast of technology and standards by aligning with the 3GPP-recommended migration path

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## Specifications for MSS

### Capacity

**Call processing:**

200,000 BHCA for SMS/LU

**Traffic:**

2,500 Erlang

**VLR:**

100,000 subscribers

**HLR:**

100,000 subscribers

**Power supply:**

Optional dual-redundant 450W AC or DC hot-swap power supply

**Physical:**

1.70in.(4.32cm)x16.93in.(43cm)x20in.(50.8cm) (HxWxD)

**Safety and EMC:**

UL 60950-1, 1st edition/CSA222, Low Voltage Directive 73/23/EEC, TUV/GS to EN60950-1, 1st edition, CB Certificate and Report to IEC 60950-1 1st edition and all international deviations

EMC Directive 89/336/EEC

EN55022, EN55024, EN61000-4-x (where x is 2, 3, 4, 5, 6, 8 and 11)

EN61000-3-2, EN61000-3-3

FCC47 CFR parts 2 and 15 Verified Class A Limit

### ENVIRONMENTAL

**Temperature (operating):**

41°F to 104°F (5°C to 40°C)

**Temperature (non-operating):**

-104°F to 158°F (-40°C to 70°C)

RoHS Directive 2002/95/EC

(NEBS-3 compliant server available on request)

## Specifications for Media Gateway

**TDM interface:**

ISUP SS7, ISDN PRI

**Capacity:**

4 to 16 E1 ports per Media Gateway

(Larger Media Gateway available on request)

**IP Network interface:**

Dual 10/100 Base-T Ethernet ports via 2 RJ-45 connectors

**Power supply:**

Single universal 90-260VAC or dual-redundant AC or single -48VDC

**Physical:**

1U high, 19-inch wide rack mount

**Safety and EMC:**

UL60950

FCC part 15 Class A

CE Mark (EN55022 Class A, EN60950, EN55024, EN300386)

### ENVIRONMENTAL

**NEBS Level 3:**

GR-63-Core (DC-powered model), GR-1089-Core Type 1 and 3, ETS300 019

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### **Website: [www.adc.com](http://www.adc.com)**

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